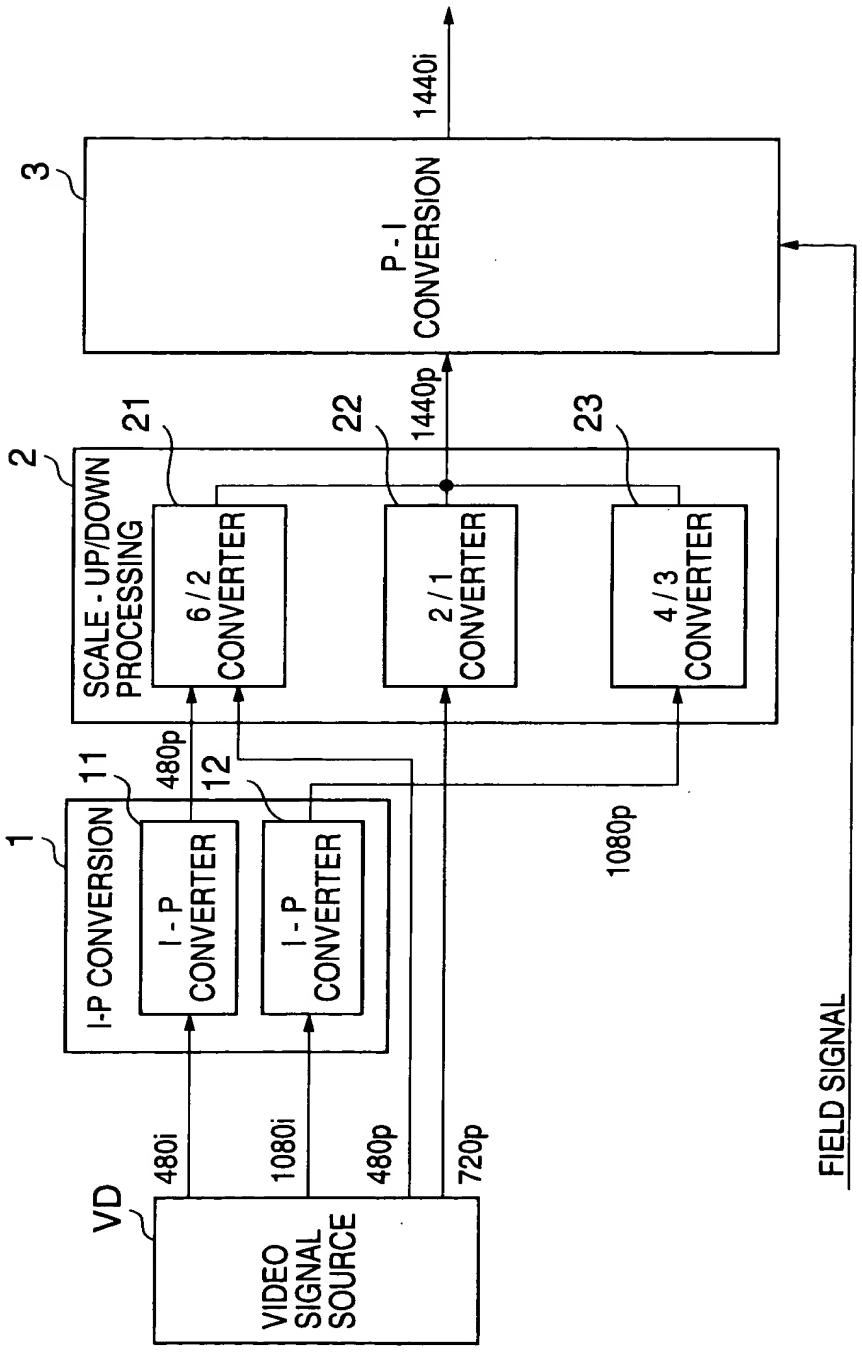
VD
VIDEO SIGNAL SOURCE
480i
1080i
480p
720p
1
I-P CONVERSION
11
I - P CONVERTER
12
I - P CONVERTER
480p
1080p
2
SCALE - UP/DOWN PROCESSING
21
6 / 2 CONVERTER
22
2 / 1 CONVERTER
23
4 / 3 CONVERTER
1440p
3
P - I CONVERSION
1440i
FIELD SIGNAL

FIG.1

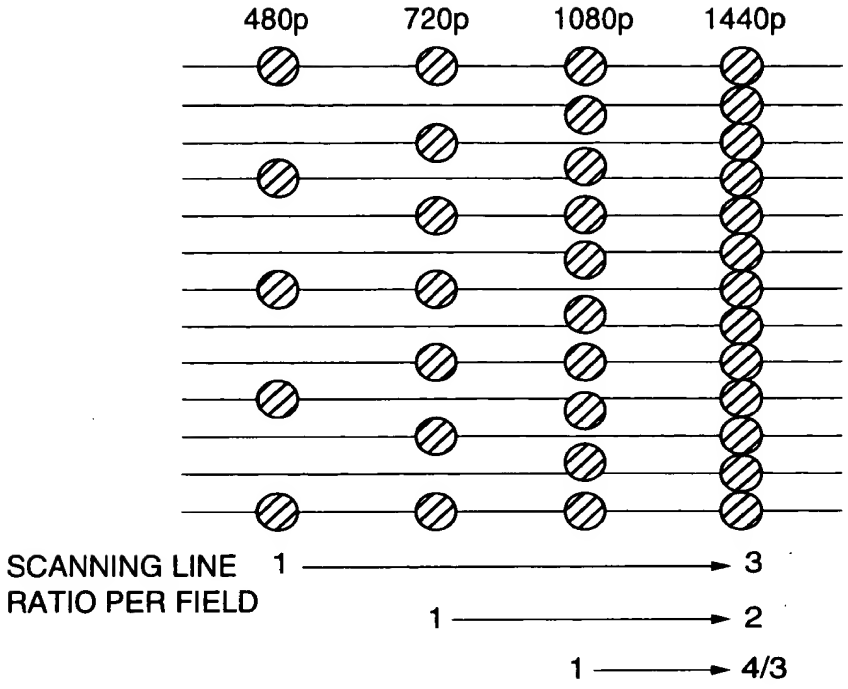

FIG.2

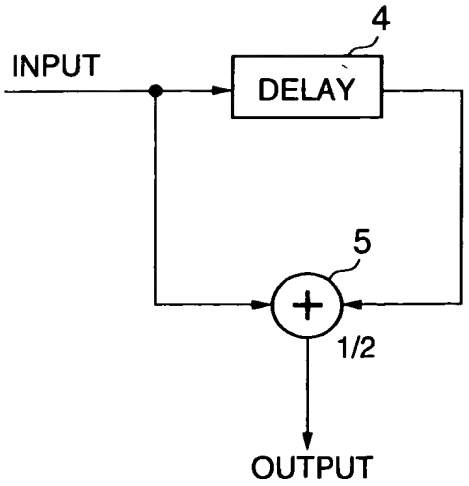

FIG.3A

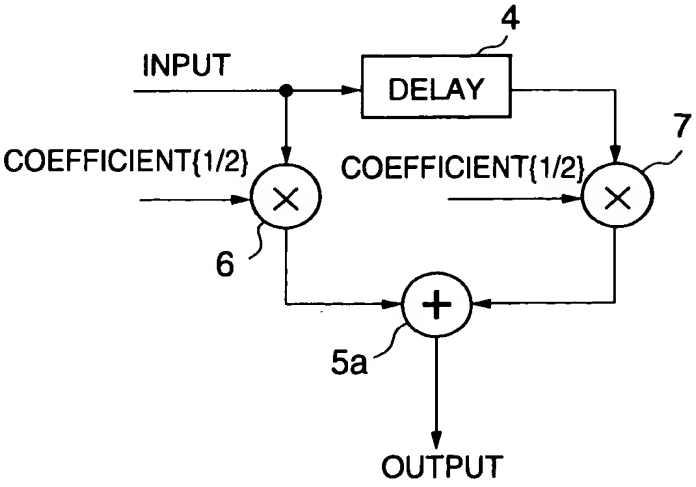

FIG.3B

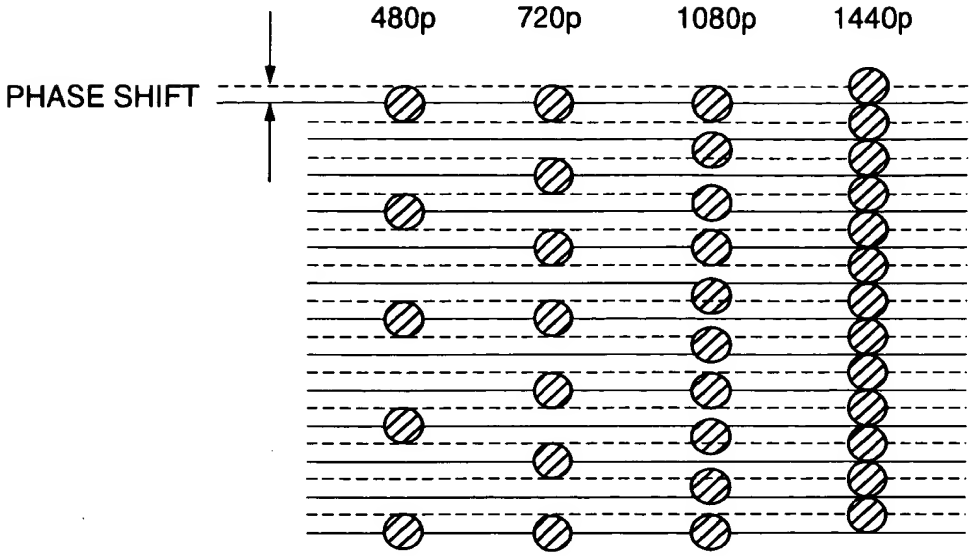
480p
720p
1080p
1440p
PHASE SHIFT

FIG.4

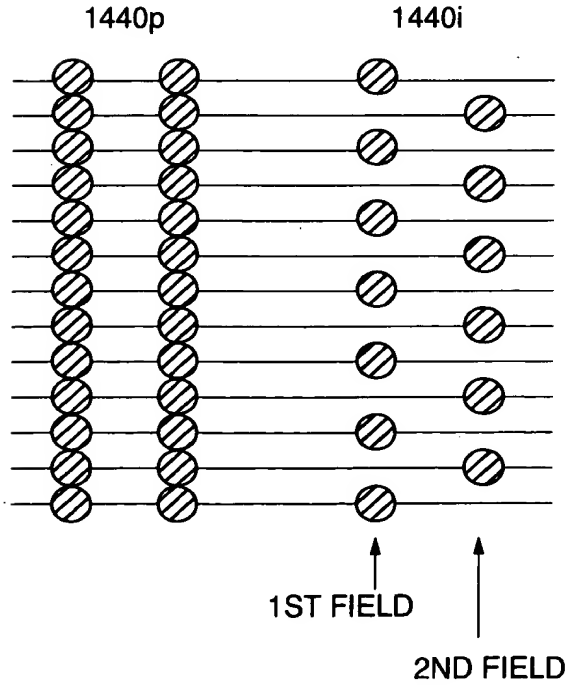
1440p
1440i
1ST FIELD
2ND FIELD

FIG.5

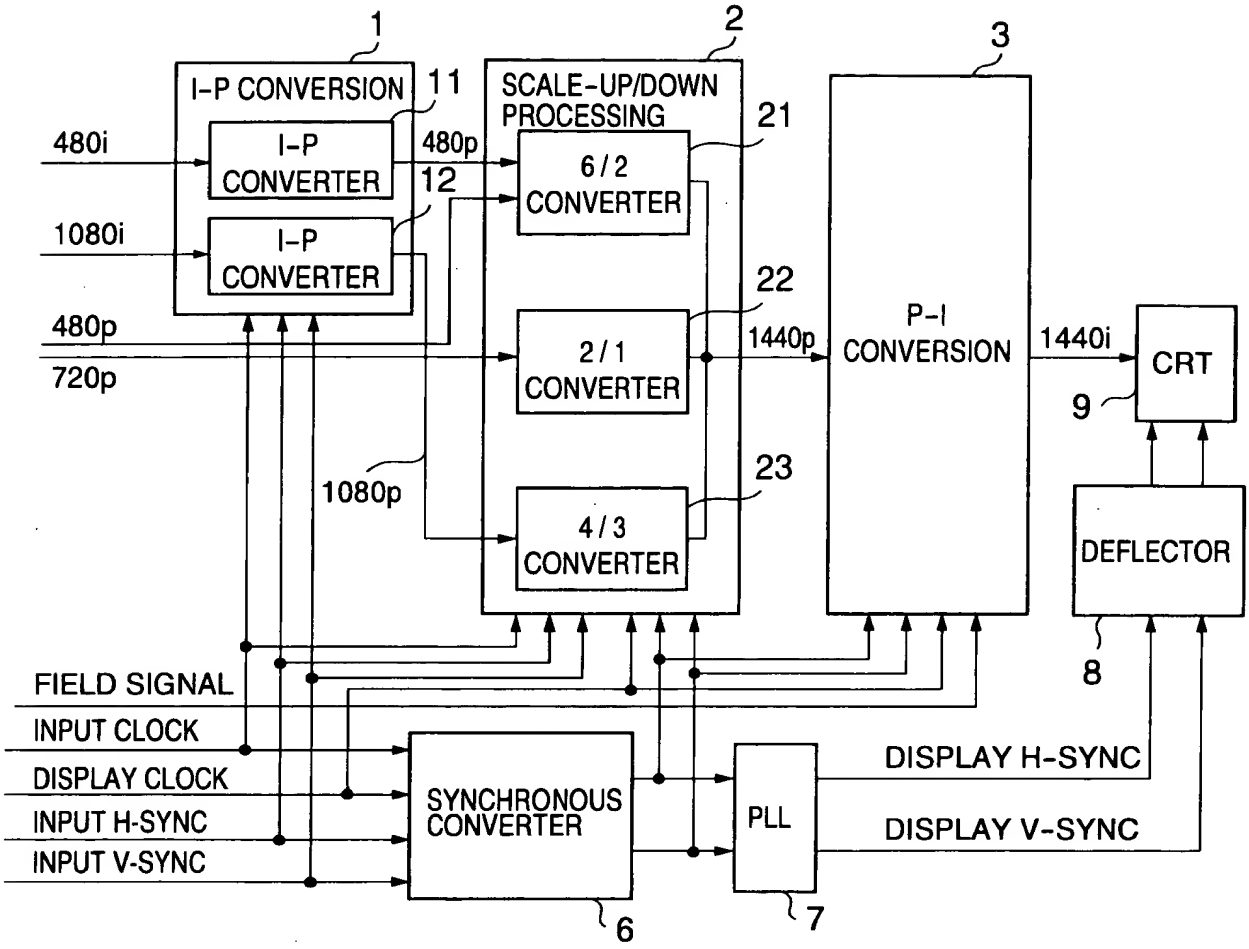
1
2
3
I-P CONVERSION
11
SCALE-UP/DOWN PROCESSING
21
480i
I-P CONVERTER
480p
6/2 CONVERTER
12
1080i
I-P CONVERTER
22
480p
2/1 CONVERTER
1440p
P-I CONVERSION
1440i
CRT
9
720p
1080p
23
4/3 CONVERTER
DEFLECTOR
8
FIELD SIGNAL
INPUT CLOCK
DISPLAY CLOCK
INPUT H-SYNC
INPUT V-SYNC
SYNCHRONOUS CONVERTER
PLL
DISPLAY H-SYNC
DISPLAY V-SYNC
6
7

FIG.6

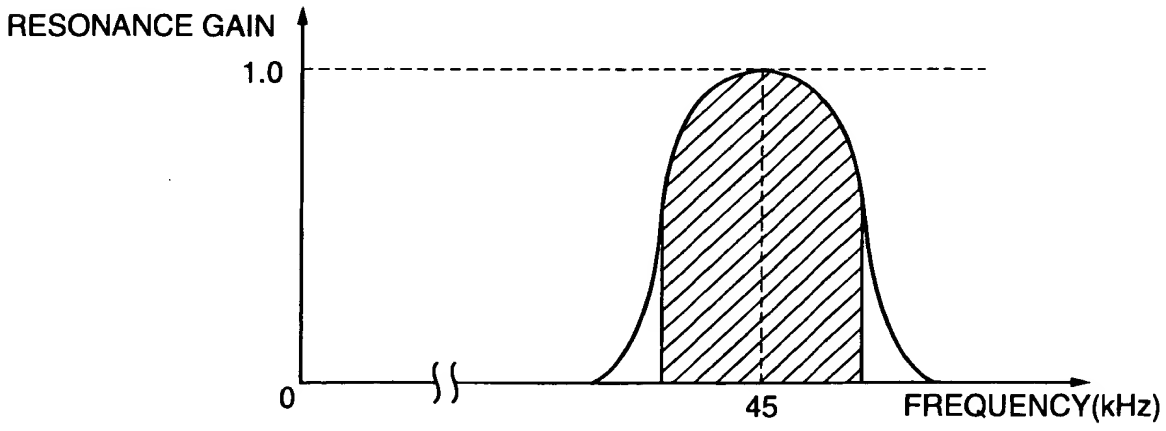
RESONANCE GAIN
1.0
0
45
FREQUENCY(kHz)

FIG.7

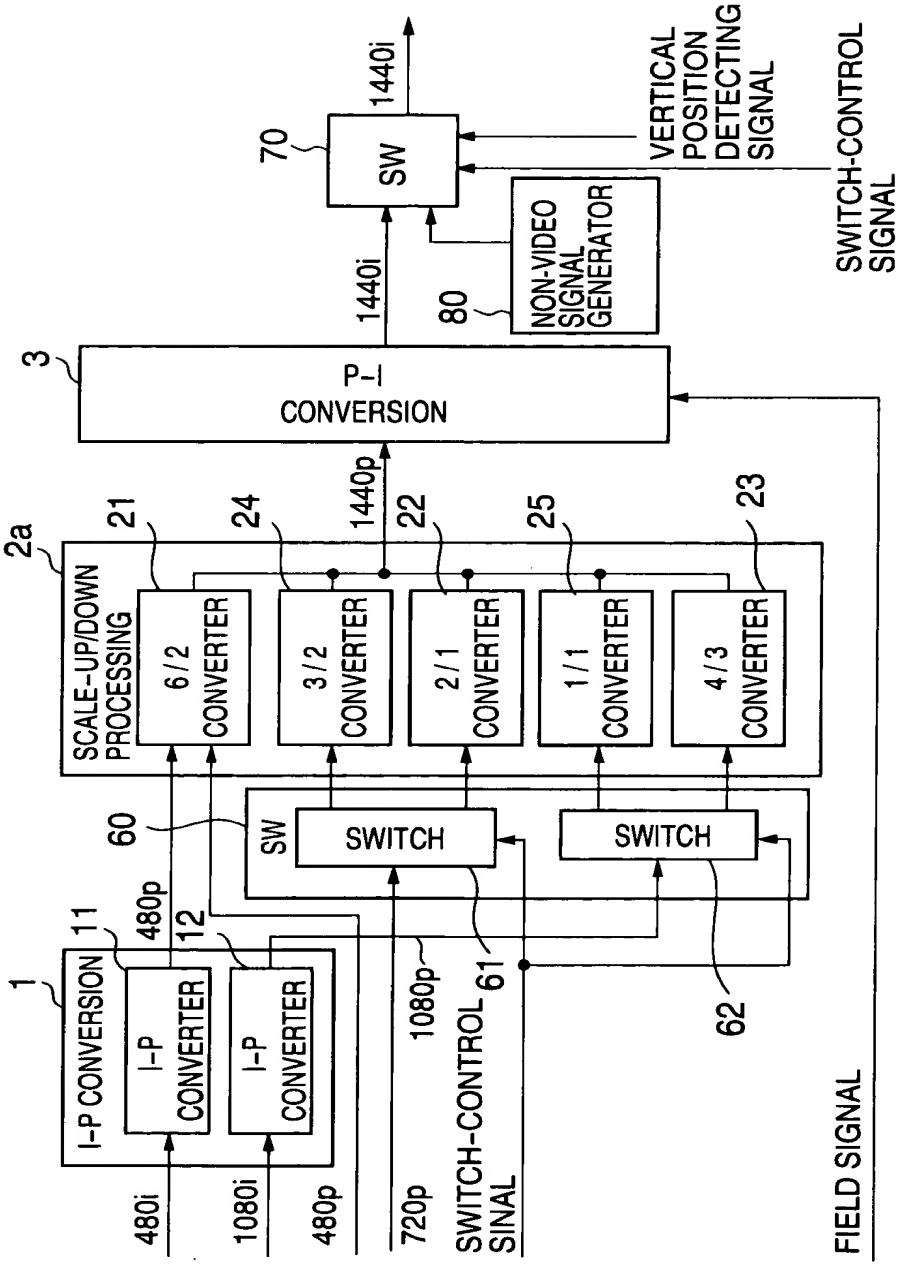
1
I-P CONVERSION
11
I-P CONVERTER
12
I-P CONVERTER
480p
480i
1080i
480p
720p
1080p
SWITCH-CONTROL SINAL
61
62
60
SW
SWITCH
SWITCH
2a
SCALE-UP/DOWN PROCESSING
21
6/2 CONVERTER
24
3/2 CONVERTER
22
2/1 CONVERTER
25
1/1 CONVERTER
23
4/3 CONVERTER
1440p
3
P-I CONVERSION
1440i
80
NON-VIDEO SIGNAL GENERATOR
70
SW
1440i
VERTICAL POSITION DETECTING SIGNAL
SWITCH-CONTROL SIGNAL
FIELD SIGNAL

FIG.8

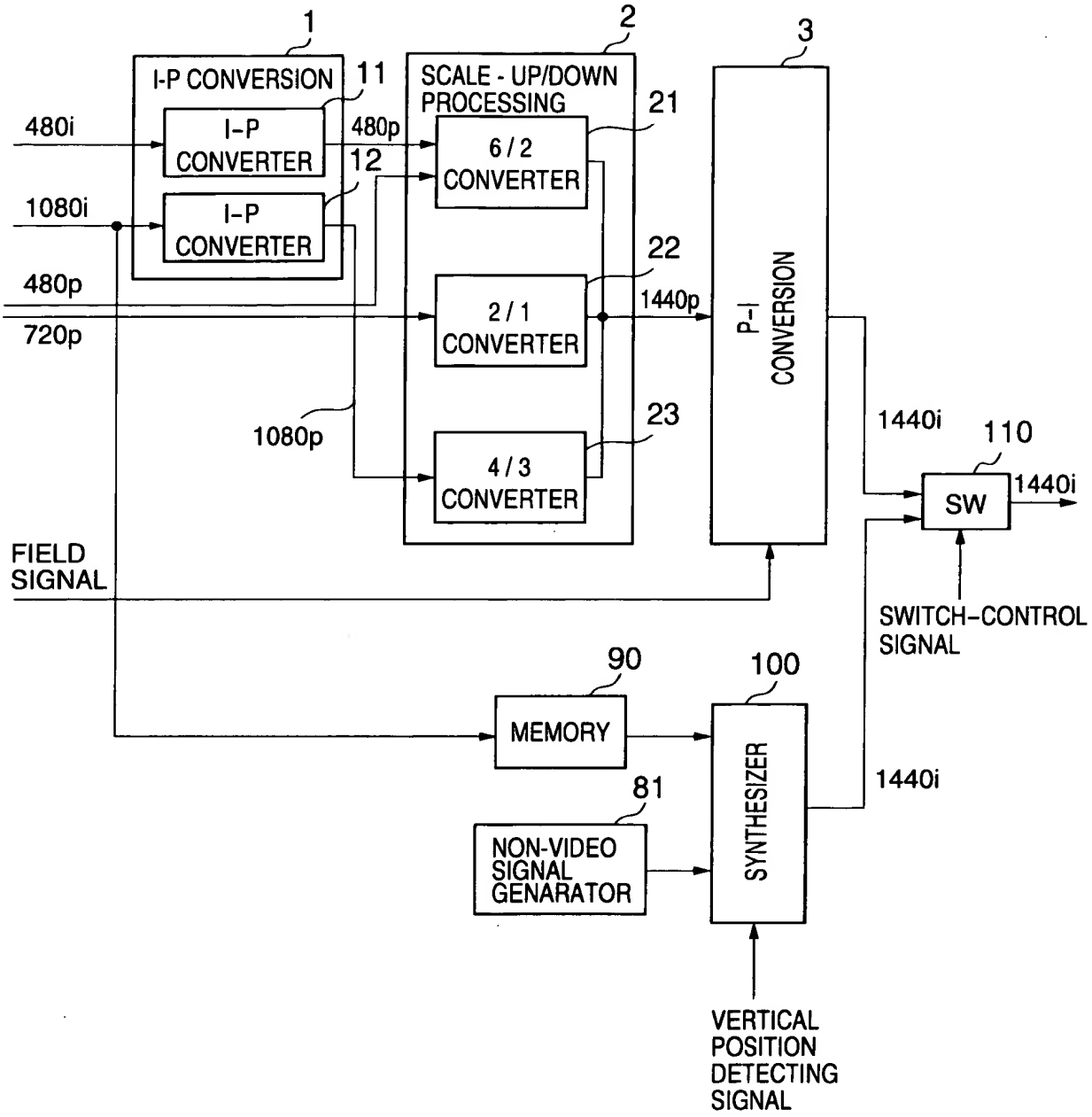
1
I-P CONVERSION
11
480i
I-P CONVERTER
480p
12
1080i
I-P CONVERTER
480p
720p
1080p
2
SCALE - UP/DOWN PROCESSING
21
6 / 2 CONVERTER
22
2 / 1 CONVERTER
1440p
23
4 / 3 CONVERTER
3
P-I CONVERSION
1440i
110
SW
1440i
SWITCH-CONTROL SIGNAL
FIELD SIGNAL
90
MEMORY
100
SYNTHESIZER
1440i
81
NON-VIDEO SIGNAL GENARATOR
VERTICAL POSITION DETECTING SIGNAL

FIG.9

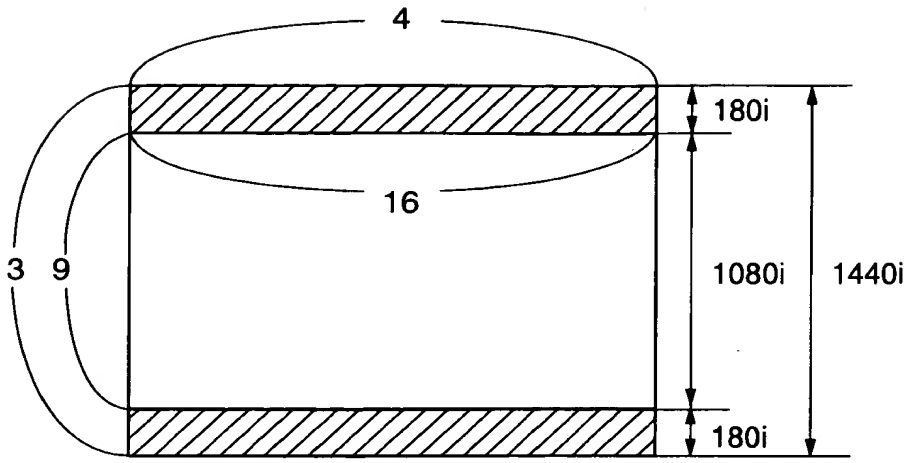

FIG.10

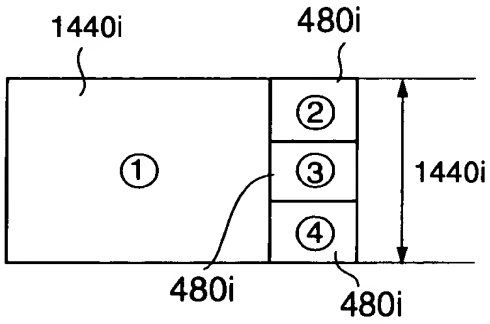

FIG.11A

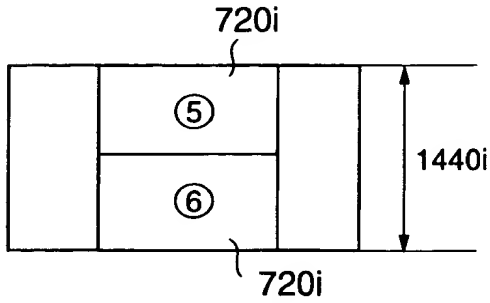

FIG.11B

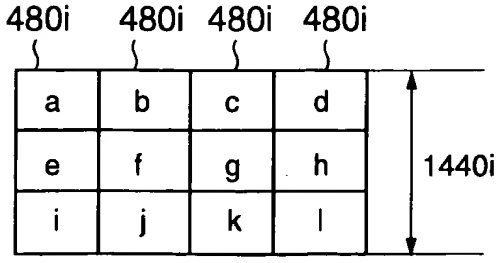

FIG.11C

EP 0 774 864 A2

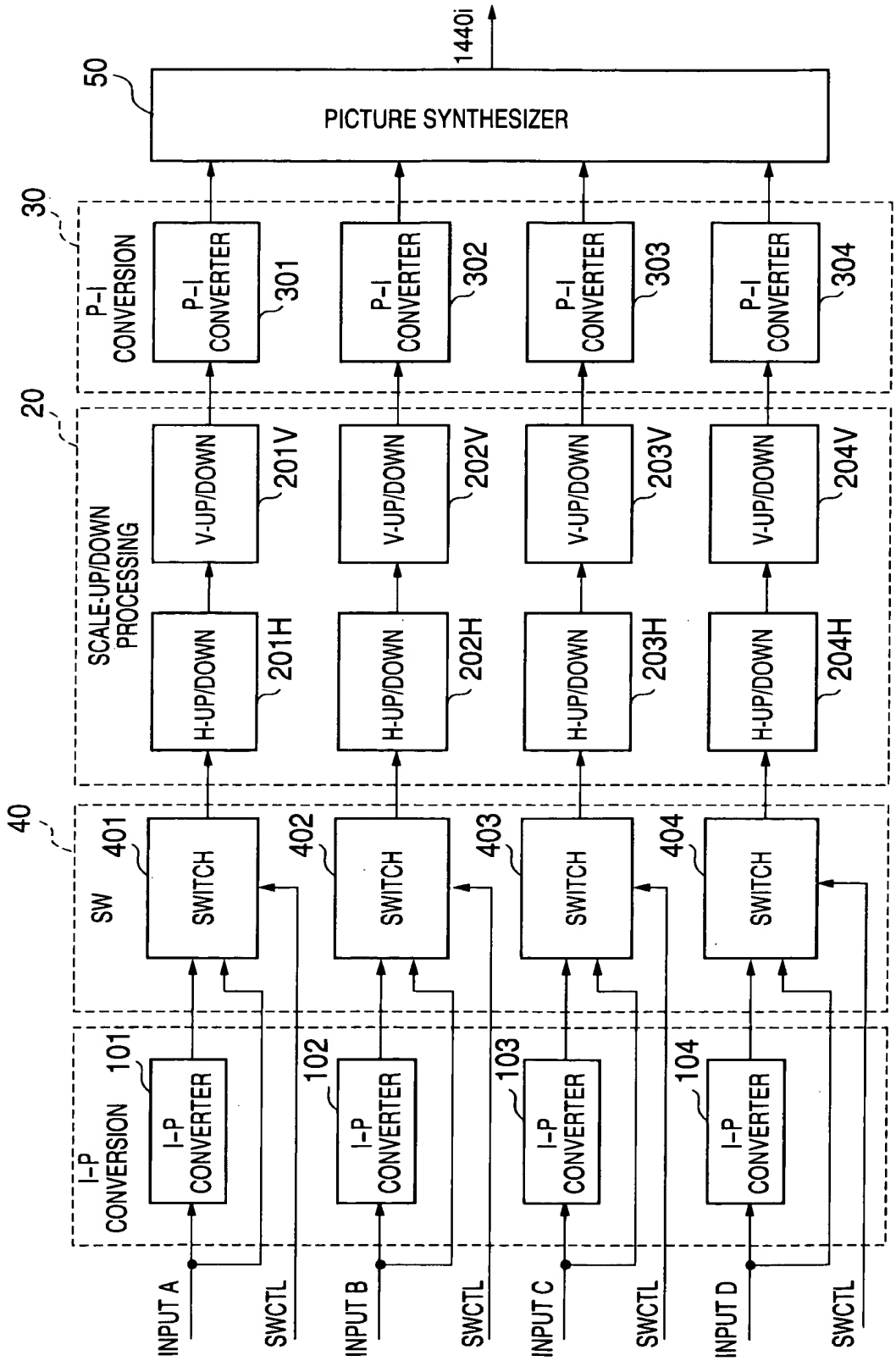
1440i
50
PICTURE SYNTHESIZER
30
P-I CONVERSION
P-I CONVERTER 301
P-I CONVERTER 302
P-I CONVERTER 303
P-I CONVERTER 304
20
SCALE-UP/DOWN PROCESSING
V-UP/DOWN 201V
V-UP/DOWN 202V
V-UP/DOWN 203V
V-UP/DOWN 204V
H-UP/DOWN 201H
H-UP/DOWN 202H
H-UP/DOWN 203H
H-UP/DOWN 204H
40
SW
401 SWITCH
402 SWITCH
403 SWITCH
404 SWITCH
I-P CONVERSION
101 I-P CONVERTER
102 I-P CONVERTER
103 I-P CONVERTER
104 I-P CONVERTER
INPUT A
INPUT B
INPUT C
INPUT D
SWCTL
SWCTL
SWCTL
SWCTL

FIG.12

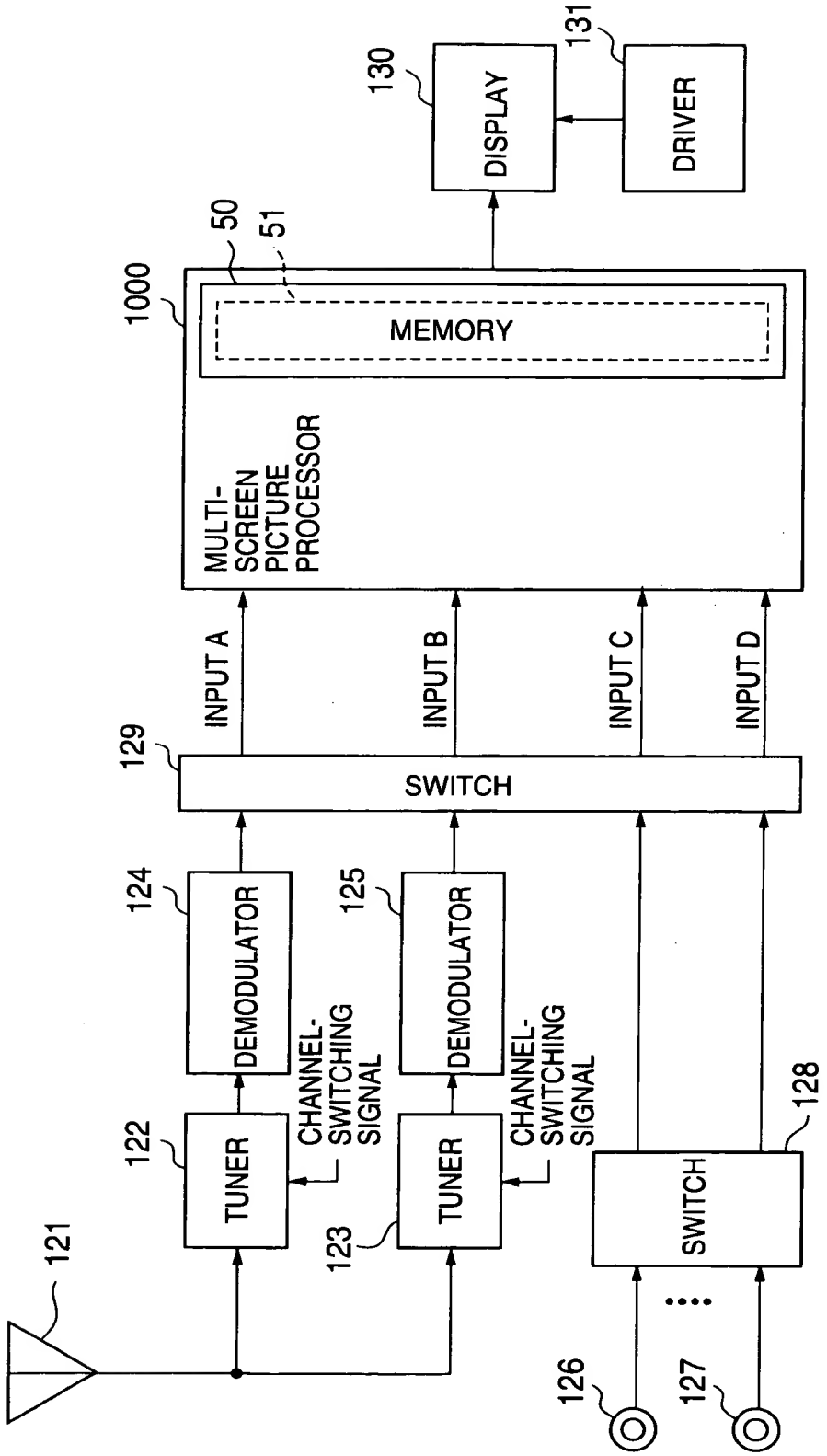
130
DISPLAY
131
DRIVER
50
51
1000
MEMORY
MULTI-
SCREEN
PICTURE
PROCESSOR
INPUT A
INPUT B
INPUT C
INPUT D
129
SWITCH
124
DEMODULATOR
125
DEMODULATOR
CHANNEL-
SWITCHING
SIGNAL
CHANNEL-
SWITCHING
SIGNAL
122
TUNER
123
TUNER
128
SWITCH
121
126
127

FIG.13